APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,846	07/24/2001	David Pierre Gendron	1027-003US01	3912

28863	7590	06/03/2005	

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ART UNIT	PAPER NUMBER
3626	

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/911,846	GENDRON ET AL.
	Examiner	Art Unit	
	Kim T. Bui	3626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 July 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/4/01, 7/8&30/02,</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities: "user

interface 95" on page 19, line 19 should apparently read "user interface 96".

Appropriate correction is required.

Drawings

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference character(s) not mentioned in the

description: Fig. 10, element 96. Corrected drawing sheets in compliance with 37 CFR

1.121(d), or amendment to the specification to add the reference character(s) in the

description in compliance with 37 CFR 1.121(b) are required in reply to the Office action

to avoid abandonment of the application. Any amended replacement drawing sheet

should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. Each drawing sheet submitted after the filing

date of an application must be labeled in the top margin as either "Replacement Sheet"

or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the

examiner, the applicant will be notified and informed of any required corrective action in

the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 3, 8-19 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

(A)   As per claim 3, it is unclear what the abbreviation "DICOM" in claim 3, line 2,

represents.

(B)   As per claim 8, "the network communication" in claim 8, line 8 lacks clear

antecedent basis.

(C)   As per claim 11, "in part" in claim 11, on line 5 is unclear.

(D)   As per claim 13, "the network communication" in claim 13, on line 2 and "the

AEName defined within the routing information" " in claim 13, on line 3 lack clear

antecedent basis.

(E)   As per claim 17, "the corrected medical imaging" in claim 17, line 3 lacks clear

antecedent basis.

(F)   As per claim 18, "based on the asset media information to the routing

information" in claim 18, line 7 is unclear.

(G)   Dependent claims 9-10,12-16 and 19 incorporate the deficiencies of the claims

they dependent on and are therefore rejected.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1,2,8-13, 18-19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Schnellinger at al. (5642513).

(A)   As per claim 1, Schnellinger et al. discloses a method and apparatus for storing

and routing medical information asset comprising:

a.   a first data structure that stores control routing information (i.e. meta information)

for control the routing of the asset through a medical imaging network. Schnellinger et

al., col. 3, lines 25-29, col.6, lines 5-6, lines 47-50.

b.   a second data structure that stores medical imaging information received from a

medical imaging modality. Schnellinger et al., col. 1, lines 54-57, col. 2, lines 23-32, col.

5, lines 33-35, col. 11, lines 32-33.

c.   a third data structure that stores pixel data received from the medical imaging

modality. Schnellinger et al., col. 5, lines 33-35, col. 2, lines 23-32, col. 11, lines 36-38.

        Schnellinger et al. does not expressly recite data structures that store patch data

including modifications to the medical imaging information and error detecting/correcting

information. Schnellinger et al., however, teaches on col. 5, lines 25-26, lines that the

system includes security and error checking functions, and on col. 11, lines 46-50 that

image information can be previewed, adjusted, manipulated and composed. As such, it

is readily apparent that data structures for patch data and error detecting/correcting are

necessary for carrying these functions. It would have been obvious to one having

ordinary skill in the art at the time of the invention to include stored data structures for

data modification and error detecting/correcting information with the motivation of

increasing the security and reliability of the system. Schnellinger et al., col. 5, lines 25-26.

(B)   As per claim 8, Schnellinger et al. discloses a method for routing medical information comprising:

a.   storing routing information mapping to route within a network. Schnellinger et al. col. 3, lines 25-30.

b.   receiving stored information asset comprising: (i) asset control routing information (i.e. meta information); (ii) original medical information received from a medical imaging modality, and (iii) data including modifications to the medical imaging information. Schnellinger et al., col.3, lines 25-29, col.6, lines 5-6, lines 47-50, col. 1, lines 54-57, col. 2, lines 23-32, col. 5, lines 33-35, col. 11, lines 32-33, lines 46-50.

c.   selecting a route from the routing information based on the control routing information. Schnellinger et al., col. 6, lines 5-9, lines 45-59.

d.   forwarding the network communication according to the selected route. Schellinger, col. 4, lines 25-26.

Schnellinger et al. does not expressly recite the receiving of data structures that store patch data including modifications to the medical imaging information. Schnellinger et al., however, teaches on col. 11, lines 46-50 that image information can be stored, retrieved, previewed, adjusted, manipulated and composed. As such, it is readily apparent that the receiving of stored patch data including modifications to the medical imaging information is necessary for retrieving, adjusting, manipulating or composing the image information. It would have been obvious to one having ordinary

skill in the art at the time of the invention to including the receiving of patch data having

modifications of image information with the motivation of providing tool for adjusting and

manipulating the image data. Schnellinger et al., col. 11, lines 46-50.

(C)   As per claim 18, Schnellinger et al. discloses a system for routing medical

information comprising:

a.   computer retrievable storage medium for storing routing information mapping

destinations to routes within a medical imaging network. Schnellinger et al. col. 3, lines

25-30, col. 5, lines 1-4.

b.   routing module to route a stored information asset comprising: (i) asset control

routing information (i.e. meta information); (ii) original medical information received from

a medical imaging modality, and (iii) data including modifications to the medical imaging

information. Schnellinger et al., col.3, lines 25-29, col. 5, lines 58-62, col.6, lines 5-6,

lines 47-50, col. 1, lines 54-57, col. 2, lines 23-32, col. 5, lines 33-35, col. 11, lines 32-

33, lines 46-50.

wherein the routing module selects a route based on the asset meta information

to the routing information. Schnellinger et al., col. 6, lines 5-9, lines 45-59, col. 4, lines

25-26.

Schnellinger et al. does not expressly recite the patch data including

modifications to the medical imaging information. Schellinger et al., however, teaches

on col. 11, lines 46-50 that image information can be stored, retrieved, previewed,

adjusted, manipulated and composed. As such, it is readily apparent the patch data

including modifications to the medical imaging information is necessary for retrieving,

adjusting, manipulating or composing the image information. It would have been

obvious to one having ordinary skill in the art at the time of the invention to including the

receiving of patch data having modifications of image information with the motivation of

providing tool for adjusting and manipulating the image data. Schnellinger et al., col. 11,

lines 46-50.

(D)   As per claim 2, Schnellinger et al teaches the medical information including

patient information, group/element numbers associated with the data from the header

(i.e. session information), image information and messages (i.e. study information) on

col. 6, lines 45-46, lines 48-51, col. 9, lines 1-3, col. 8, lines 59-60, col. 11, lines 32-35.

(E)   As per claim 9, Schnellinger teaches pixel data received from the medical

imaging modality on col. 2, lines 23-32, col. 11, lines 36-38.

(F)   As per claim 10, Schnellinger et al., teaches the error detecting/correcting on col.

5, lines 25-26.

(G)   As per claim 11, Schnellinger et al. teaches the steps for storing of set of routing

rules, for comparing the medical image data to the set of routing rules and for selecting

the route based on the comparison. Schellinger et al., col. 3, lines 25-30, col. 4, lines

42-44, col. 6, lines 7-9, lines 42-43, col. 4, lines 25-26, col. 5, lines 1-4.

(H)   As per claims 12, 13, 19, Schnellinger et al. teaches the mapping or comparison

of element structures in an ACR-NEMA image message, and utilizes rules and data

within routing information, which is a form of comparing AEName defined within the

routing information and network, to route medical information within the imaging

network, on col. 4, lines 25-26, lines 42-44, col. 3, lines 25-30, col. 6, lines 7-9, lines 42-43.

7.   Claims 3,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schnellinger et al. as applied to claims 1, 12 above, and further in view of Pourjavid (5883985).

(A)   As per claim 3, Schnellinger et al. teaches the transmission of messages, elements, flag and pointer on col. 6, lines 45-48, lines 55-63. Schnellinger et al. fail to expressly recite the DICOM tags and messages. However, it is within a level of ordinary skill in the art to select a type of protocol, such as DICOM, for transmitting packet, as evidenced by Pourjavid. Pourjavid, col. 3, lines 17-19. It would have been obvious to one having ordinary skill in the art at the time of the invention to include DICOM protocol with the motivation of conforming to common practice in communication technology. Pourjavid, col. 3, lines 17-19.

(B)   As per claim 17, Schnellinger teaches the storing, retrieving, previewing, adjusting, manipulating and viewing modified image information on col. 11, lines 46-50. In addition, Pourjavid teaches image transmission system wherein corrected image(s) are displayed on a diagnosis view station. Pourjavid, col. 5, lines 5-14, lines 50-58, col. 6, lines 11-16. It would have been obvious tone having ordinary skill in the art at the time of the invention to include correction of image with the motivation of producing image of optimum contrast. Pourjavin, col. 4, lines 9-10.

8.   Claims 6, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Schnellinger et al. as applied to claims 1, 11 above, and further in view of DeLaHuerga

(2002/0116509).

(A)   As per claims 6, 16, Schnellinger teaches the correction on col. 11, lines 46-50,

but fail to expressly recite the timestamp function. This, however, is well known in the

art as evidenced by DeLaHuerga. DeLaHuerga teaches the packet information units

having patient ID, target addresses, information or contents, date and time information

on page 11, paragraph 0146, page 12, paragraph 0151 wherein the user can access

and reacess the information unit for modifications using a tool such as pull down

window (i.e. operator). See DeLaHuerga, page 7, paragraph 0081, page 18, paragraph

0221. It would have been obvious to one having ordinary skill in the art at the time of the

invention to include a time stamping function with the motivation of keeping record of

modifications for verification. DeLaHuerga, page 3, paragraph 0027.

9.   Claims 4,5,14,15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schnellinger et al. as applied to claims 1, 11 above, and further in view of Zandi et

al. (6195465).

(A)   As per claims 4, 5,14,15, Schnellinger et al. does not recite thumbnail data. This,

however, is well known as evidenced by Zandi et al. Zandi et al. discloses a image

compression/decompression for transmitting large amount of image data including

thumbnails and low resolution version for displaying image. Zandi, col. 46, lines 32-35,

col. 8, lines 8-11. It would have been obvious to one having ordinary skill in the art at

the time of the invention to include thumbnails and low resolution with the motivation of

facilitating the browsing of displayed image. Zandi et al. col. 48, lines 8-11.

10.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Schnellinger et al. as applied to claim 1 above and further in view of Booth et al.

(6065073).

(A)   As per claim 7, Schnellinger teaches error checking on col. 5, lines 25-26.

Schnellinger et al fails to recite cyclical redundancy check (CRC). This, however, is well

known as evidenced by Booth et al. Booth et al discloses a packet transmitting method

including cyclical redundancy checking. Booth et al. col. 3, lines 1-2. It would have been

obvious to one having ordinary skill in the art at the time of the invention to include a

cyclical redundancy check function with the motivations of conforming to standard

practice and of improving reliability. Booth et al. col. 7, lines 65-67.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. ""Computer system having distributed texture memory

architecture" (6762673); "Telemedicine system" (6820057); "Ultrasound System"

(5971923), "Medical perfusion system" (2001/0013822 A1), "Health monitoring system"

(6282441), "Processing structure for real time processing of medical ultra- sound

images", Lokberg, Ola, 1992, Computer Science, vol. 54/02-C of Dissertation abstracts

international, page 589. Dialog File 35, Acc. no. 01285388.

12.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim T. Bui whose telephone number is 571-272-6768. The examiner can normally be reached on Monday-Friday from 8:30A.M. to 5:00P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 571-272-6776. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KTB
5/30/2005

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